

REMARKS

Claims 35-67 and 69 are pending, and new claims 70-74 have been added. No new matter has been added.

Claims 35 and 69 have been objected to due to informalities. Claims 35 and 69 have been amended accordingly.

Claims 35-67 and 69 have been rejected under 35 USC 112, second paragraph. In this regard, the Examiner cites paragraph [0034] as providing support for the added limitation, and generally interprets the new limitation based on this paragraph. Here, the Examiner limits the scope of the phrase to mean that the overall resulting total current is evened out. Indeed, while this interpretation is a correct analysis of the effect of adding current conducting tracks for increasing current capacity in the corrective element relative to the total current level capacity from the circuit board, there is no recitation in the claim language that requires an evening out of the overall resulting total current. Hence, this limitation should not be read into the claims. Applicants also direct the Examiner to paragraph [0039] for additional explanation. That said, there is a recitation that requires adjustment in relation to reduce distribution of the electrical currents in a substantially even manner, as recited in the claims.

Claims 35-43, 46-47, 50, 52-67 and 69 have been rejected under 35 U.S.C. §102(b) as being anticipated by *Phillips et al.* (US Patent 6,421,016); claims 35, 37, 44-45, 49 and 51 have been rejected under 35 U.S.C. §102(b) as being anticipated by *Perrotta et al.* (US Patent 6,246,374); and claim 48 has been rejected under 35 U.S.C. §103(a) as being unpatentable over *Phillips et al.* (US Patent 6,421,016). In light of the present amendments, Applicants traverse the above rejections.

Specifically, the cited art, alone or in combination, fails to teach or suggest “at least one current-conducting corrective element coupled to the circuit board, wherein the first corrective element comprises current conducting tracks for increasing current capacity in the corrective element relative to a total current level capacity directly from the circuit board, and wherein the first corrective element is embodied such that at least one of an amplitude level and a phase angle of electrical currents on the antenna, the circuit board, and the corrective element, are adjusted in relation to each other to distribute the electrical currents in a substantially even

manner, and to reduce overall electromagnetic exposure which results from electrical currents” as recited in claim 35, an similarly recited in claim 69.

In contrast, Phillips deals with reducing SAR effects, but relies on a materially different configuration, which functions under a different operating principle. In Phillips, a resonator (104) and a ground plane (108) are arranged on a circuit board that is coupled to an antenna (102), where only the ground plane is connected to the surface of the circuit board (FIG. 2). This arrangement is specifically disclosed to divert counterpoise currents from an unbalanced antenna (col. 3, lines 44-53). The resonator (104) is structured to have a low impedance at specific frequencies, so that RF currents are drawn *from the antenna* to the resonator (col. 3, lines 54-67). The ground plane (108) and circuit board are arranged as an antiresonant structure to divert RF currents from the antenna *away from the circuit board and towards the resonator* (104) (col. 4, lines 9-15, 44-53; col. 5, lines 14-22, 43-47; see claim 6). In other words, the resonator “pulls” counterpoise current from the unbalanced antenna, while the ground plane “pushes” additional current from the antenna in the direction of the resonator, in order to radiate power and to keep counterpoise current away from the circuit board and subsequently reduce SAR effects (col. 5, lines 42-56).

The Examiner cites col. 5, lines 42-49 and col. 4, lines 28-58 as disclosing the newly claimed features. Applicants respectfully disagree. With respect to the citation in col. 5, Applicants direct the Examiner’s attention to the following passages: “...the antenna counterpoise currents preferentially flow on it instead of the printed circuit board” (col. 5, lines 7-8) and “...to cause most of the antenna counterpoise current to flow on the resonator 104, rather than on the printed circuit board” (col. 5, lines 17-19). Moreover, even the paragraph cited by the Examiner specifically states that “more of the delivered power is radiated instead of being dissipated in the user”). As for the citation to col. 4, the Examiner notes that “due to the laws of physics, specifically the laws of current, the currents on the antenna, the circuit board and the first corrective element will inherently adjust in relation to each other and distribute [in] a substantially even manner.” As an initial matter, Applicants request that the Examiner cite a reference in support of this statement, or at least take Official Notice. In any event, Applicants disagree that this is occurring in the cited reference. Rather, as noted above, the antenna

counterpoise current flows to the resonator 104 as opposed to the printed circuit board. That is, the current is not being distributed, but rather displaced to another location.

Thus, Phillips fails to teach or suggest that the first corrective element (resonator 104) comprises current conducting tracks for increasing current capacity in the first corrective element relative to a total current level capacity directly from the circuit board, where the first corrective element is used to adjust an amplitude level/phase angle of electrical currents on (1) the antenna, (2) the circuit board, and (3) the corrective element, such that the electrical current will be evenly distributed. Presuming that the resonator (104) of Phillips increases current capacity, it does so relative to *the antenna*, and not to the circuit board. Additionally, since counterpoise current is pushed/pulled directly to the resonator, it cannot be said that electrical current is distributed in a "substantially even manner" among the antenna/circuit board/resonator. For at least these reasons, Applicants submits the rejection is traversed and should be withdrawn.

Regarding Perrotta, the reference fails to teach or suggest the features described above. Under Perrotta, a parasitic element (18) operates as a passive radiator element to radiate along with the main antenna (16) to enhance the gain of the antenna system (see Abstract). Perrotta discloses that the parasitic element and antenna are not physically connected by a common feed point, but are magnetically coupled in parallel to allow the two elements to radiate in a complimentary fashion (col. 2, lines 15-20, 37-43; col. 3, lines 27-29, 38-39; see claim 5). As the Examiner cites for the newly added limitations, Perrotta also discloses that the parasitic radiator operates to divert current from speaker wires or other audio lines from entering the circuit board (col. 3, lines 3-8), in order to reduce proximity effects that may distort transmissions when a user's hand interferes with the antenna's radiating area (col. 3, lines 8-14). However, this passage of the reference fails to disclose that which is claimed, as detailed below.

Specifically, Perrotta fails to teach or suggest a first corrective element (radiator 18) that comprises current conducting tracks for increasing current capacity in the first corrective element relative to a total current level capacity directly from the circuit board, where the corrective element is used to adjust an amplitude level/phase angle of electrical currents on (1) the antenna, (2) the circuit board, and (3) the corrective element, such that the electrical current will be evenly distributed. Applicants cannot find anywhere in Perrotta where such a configuration is disclosed. For at least these reasons, Applicants submit the rejection is traversed and should be withdrawn.

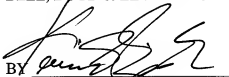
Additionally, the Examiner generally states that "due to the laws of physics, specifically the laws of current, the currents on the antenna, the circuit board and the first corrective element will inherently adjust in relation to each other and distribute [in] a substantially even manner." As an initial matter, Applicants request that the Examiner cite a reference in support of this statement, or at least take Official Notice. In any event, Applicants disagree that this is occurring in the cited reference. Rather, current has an "escape route" to leave the circuit board. That is, the current is not being distributed, but rather escaping to another location.

In light of the present amendments, Applicants respectfully submit the rejections under 35 U.S.C. §102 have been overcome. Withdrawal of the rejections is earnestly requested. As Applicants have demonstrated the allowability of independent claims 35 and claim 69, withdrawal of the remaining rejections including those under 35 U.S.C. §103 are also requested.

In light of the above, the Applicants respectfully submit that claims 35-67 and 69-74 are both novel and non-obvious over the art of record. Accordingly, the Applicants respectfully request that a timely Notice of Allowance be issued in this case. If any additional fees are due in connection with this application as a whole, the Commissioner is authorized to deduct said fees from Deposit Account No.: 02-1818. If such a deduction is made, please indicate the attorney docket number (119065-024) on the account statement.

Respectfully submitted,

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